# Building Our Crowd

## From Individual Intelligence to Collective Wisdom

August 28, 2025

# Today's Mission

## Meet people + Think critically about task design

# Agenda

1. **Network Building** (25 min)
2. **Task Analysis** (30 min)
3. **Platform Experiments** (25 min)
4. **Worker Preview** (10 min)

# Part 1
## Speed Networking
### 25 minutes

# 📱 OPEN SLI.DO NOW

**Event Code:  1776**

Keep it open all class

Note: We'll use this for polls and tracking throughout.

# How many years have you been programming?

# How many total years of programming in this room?

# How This Works

- **3 rounds**
- **8 minutes each**
- **New partner each time**
- **Specific prompts**

Goal: **3+ connections**

# Round 1

## Crowdsourcing Ourselves

# Round 1 Instructions

**Find someone new!**

Exchange:

- Name & major
- Programming experience (1-10)
- Number of years programming
- One crowd platform you use

Note: 4 minutes for introductions.

# Round 1 Task

**Together, estimate:**

"Total years of programming experience in this room?"

Write it down!

# 📱 POLL #1

Submit your pair's estimate

**Total programming years**

# ⏰ SWITCH!

30 seconds to find someone new

# Round 2

## Human vs Machine

# Round 2 Task

Each person shares:

1. Task humans ALWAYS beat AI
2. Task you thought was human-only... until recently

# Round 2 Creation

**Together, invent:**

One hybrid human-AI task (Better than either alone)

# 📱 POLL #2

Submit your hybrid task idea

*One sentence*

*Each partner submits their own version of the sentence*

# ⏰ SWITCH AGAIN!

Find partner #3

Note: Last round coming up.

# Round 3

## When Crowds Fail

# Round 3 Share

Each tell a story:

**"A failed crowd decision I was part of"**

Which wisdom requirement broke?

1. **Independence**
2. **Aggregation Method**
3. **Knowledge Distribution**
4. **Incentive Alignment**
5. **Verifiability**

# Round 3 Solution

**Together decide:**

What intervention could have prevented the failure?

# Let's Check Our Wisdom

📱 **REVEAL POLL #1**

How close were we?

# Part 2

## Task Analysis Workshop

### 30 minutes

We are now going to apply Surowiecki's framework to evaluate crowdsourcing tasks from last class.

# The Five Requirements

1. **Independence**
2. **Aggregation Method**
3. **Knowledge Distribution**
4. **Incentive Alignment**
5. **Verifiability**

# Independence

✅ People answer without influence

❌ Answers depend on others

# Aggregation

✅ Clear combination method (average, vote, count)

❌ No way to synthesize

# Knowledge Distribution

✅ Many people have pieces

❌ Only experts know

# Incentive Alignment

✅ Motivated to be honest

❌ Reasons to game system

# Verifiability

✅ Can check if crowd was right

❌ Pure opinion, no validation

# Test Case #1

## "Guess secret number 1-100"

Seems good?

**POLL QUESTION**

# The Fatal Flaw

**No information to aggregate!**

- Jellybeans in jar: Visual cues ✅
- Secret number: Pure randomness ❌

Average → 50.5

# Test Case #2

## "Worst health violations in Philly?"

What could go wrong?

**POLL QUESTION**

# Incentive Failure

- Competitors sabotage
- Owners mobilize friends
- Angry customers revenge-post

**Knowledge exists, but incentives corrupt**

# Your Turn

Pick one task to evaluate from crowdsourced list earlier this week

https://pastebin.com/aUdY8QMp

# Solo Scoring

## 3 minutes

| Requirement | Score |
|---|---|
| Independence | _/5 |
| Aggregation | _/5 |
| Knowledge | _/5 |
| Incentives | _/5 |
| Verifiable | _/5 |

Be honest. Most tasks fail somewhere. That's to be expected!

# Compare with Partner

## 5 minutes

- Share scores
- Which task is better?
- What's the biggest weakness?

# 📱 POLL #3

**Vote: Best task design?**

One partner only submits the best task that the two partners have agreed on.

If it does not fulfill all 5 criteria, then explain what doesn't work.

# Part 3

## Platform Experiments

### 25 minutes

# Note to self:

Switch to old slides for this part

# You've Been Working for Free

## Every CAPTCHA you solve trains AI

# Evolution of reCAPTCHA

2000: **Prove you're human**
2007: **Digitize books**
2014: **Label images for cars**
2018: **Train AI behavior**

# Live Game

## Real or Fake Text?

**http://roft.io**

Can you spot AI writing?

# Play Categories

- Short Stories
- News Articles
- Recipes
- Presidential Speeches

**What patterns reveal AI?**

# 📱 POLL #4

**How many AI texts did you catch?**

- 0-2 (Fooled)
- 3-5 (50/50)
- 6-8 (Getting good)
- 9-10 (Beat the machine)

# Platform Landscape

| Type | Pay Model | Example |
|---|---|---|
| **Microtask** | Per task | Toloka |
| **Innovation** | Contest | Kaggle |
| **Creative** | Contest | 99designs |
| **Testing** | Session | UserTesting |

# What Platforms Share

✅ Reputation systems
✅ Payment protection
✅ Dispute resolution
✅ Task templates
✅ Community forums

# Part 4

## Next Week Preview

### 10 minutes

# Upcoming Assignment

**Work 2+ hours on any platform:**

- Clickworker, Toloka
- UserTesting
- Even Uber/DoorDash

# What to Track

- Total time (including waiting)
- Money earned
- Tasks completed
- How you feel

**Calculate true hourly wage**

# Bigham's Experience

CMU Professor tried crowd work:

**"$2.50 per hour"**

"Marking nipple locations on photos"

## My MTurk (half) Workday

*Jeffrey P. Bigham*
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7/8/2014

Last Tuesday, I spent 4 hours, half a work day, as a Mechanical Turk worker.

Over the past 6-7 years, I've spent thousands of dollars as a requester on Mechanical Turk. I've also done some small-scale turking myself. My lifetime earnings were only around $25 as of the morning of. While not much money, this almost certainly puts me near the higher end of researchers who do work on Mechanical Turk.

# Before You Leave

## 📱 POLL #5

How many people did you meet?

# For Next Week

**Read 3+:**

- Bigham's MTurk Workday

And maybe also (will email):

- Being A Turker
- Ghost Work excerpt

# Big Question

**"Is crowdsourcing fundamentally exploitative?"**

Come ready to discuss

# Today's Takeaways

1. Crowds need **structure**
2. **Incentives** make or break systems
3. You're **already** a crowd worker
4. **Task design** > platform choice
5. **Community** matters

# See you next week!